

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 2663
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q64991

Stefan Paul KELLER-TUBERG

Appln. No.: 09/935,568

Group Art Unit: 2663

Confirmation No.: 8849

Examiner: Richard CHANG

Filed: August 24, 2001

For: MULTICASTING IN IP DISTRIBUTIVE NETWORKS

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116

MAIL STOP AF

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated October 18, 2005, please consider the following remarks.

REMARKS

Claims 13-26 are all the claims pending in the application. All claims stand rejected as unpatentable over Gershon et al (USP 6,563,830) in view of Park (USP 6,301,255). This rejection is respectfully traversed.

An important feature of the invention is that the replication of the multicast data is done at the latest possible point in the flow, thereby improving the efficiency of the paths. In this case, replication is done in the subscriber access node, where the only thing downstream are point-to-point connections to individual subscribers. The invention defined in claim 1 includes

three elements: a unidirectional information flow from the multicast router to the subscriber access node, separate unidirectional multicast information flows from the subscriber access node to each of the end users, replicated from the unidirectional information flow sent from the multicast router to the subscriber access node, and a bidirectional flow of control data between the subscriber access node and each end user via respective point-to-point connections.

Gershon relates to an ATM-based emulated LAN. An Emulated LAN (ELAN) is shown at 96 in Fig. 5. There is one sending LEC 94 and two listening LECs 98 and 116 (each mis-labeled as an LES in Fig. 5). Each LEC represents a set of users and emulates a LAN interface between these users and higher layer protocols used by these users. (lines 51-55 of column 2). As described at lines 23-40 of column 3, all LECs send their traffic to a LAN Emulation Server (LES) 104 which then forwards the multicast traffic to all appropriate LEC's. Listening LECs 98 and 116 then forward the traffic to multicast listeners (114, 119) either directly or through a multicast router 112.

Gershon does not deal with the problem to which the present invention is directed, operates in a very different way, and as a consequence does not match up well with the features called out in the present claims. In reading the language of claim 1 on Gershon, the examiner has equated the sending LEC 98 with the claimed multicast router and has equated the LAN Emulation Server (LES) 100 with the claimed subscriber access node. This does not hold up for at least the following reasons.

First, the term "multicast router" has a well-understood meaning to one of ordinary skill in the art, and in fact Gershon specifically includes a multicast router at 112, so that no one of skill in the art would consider the LEC of Gershon to be a multicast router as claimed.

Second, and more importantly, since it is clear from Gershon that all LECs communicate with one another by sending traffic to the LES which then sends traffic to all appropriate destination LECs, the links between the LES and each LEC must of necessity be bidirectional. Claim 1 of the present application requires that there be a single unidirectional multicast information flow from the multicast router to the subscriber access node, and this is clearly not the case in Gershon. Indeed, while claim 1 specifies a single *unidirectional* multicast information flow between the multicast router and subscriber access node, the examiner himself when characterizing the teaching of Gershon at the last two lines of page 2 of the Office action describes Gershon as teaching a single *bidirectional* information. So the examiner is apparently in agreement that the unidirectional information flow of claim 1 is not taught by Gershon, but the examiner has not explained where this limitation is satisfied in the combined teachings of Gershon and Park.

Third, claim 1 requires that there be separate bidirectional flows of control data between each of the end users and the multicast router via the subscriber access node over separate point-to-point connections. The examiner refers to Fig. 4 and lines 1-24 of column 5, but what is described at column 5 is the establishment of a bidirectional point-to-point connection between the LEC and the LES. But this is a single point-to-point link, whereas the claim requires the establishment of separate links between the router and each end user. There is no discussion in Gershon of separate point-to-point links between the LEC 94 on the left side of Fig. 5 and the end users 114 or 119 on the right side of Fig. 5 via the LES, as would be required by claim 1.

The examiner relies on Park to teach the replicating and transmitting steps of claim 12, but this cannot render the claimed invention obvious. Park does teach replication and

transmitting, but those steps per se are not claimed to be new. It is unnecessary to discuss differences between the present invention and Park other than to say that even if one of skill in the art were to combine the teachings of Gershon and Park, there is nothing in these references that would have led the artisan to an arrangement wherein a unidirectional point-to-multipoint information flow from a multicast router to a subscriber access node is replicated in the access node and sent separately to individual subscribers in a unidirectional flow, and separate bidirectional flow of control data is provided over respective point-to-point connections between the multicast router and subscribers via the access node. Neither of the references teaches unidirectional information flow over point-to-multipoint connections in combination with bidirectional control data flow over point-to-point connections, so this feature could not result from any obvious combination of their teachings.

For the above reasons, claim 13 is believed patentable over the art of record. Independent claims 17, 21 and 25 distinguish over the cited art for the same reasons as claim 1. All dependent claims patentably distinguish over the art of record due to their dependence on allowable claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

An extension of time is requested, and the statutory fee is being paid through the Electronic Filing System. The USPTO is directed and authorized to charge all required fees,

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except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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